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REPORTS, CONCLUSIONS AND RECOMMENDATIONS OF SUBSIDIARY BODIES: ECONOMIC QUESTIONS, ENVIRONMENTAL QUESTIONS

Letter dated 21 March 1997 from the Permanent Representatives of Japan and the United States of America to the United Nations addressed to the Secretary-General

We would be most grateful for your agreement to circulate, as an official document of the fifth session of the Commission on Sustainable Development, to be held in New York from 7 to 25 April 1997, and of the special session of the General Assembly for the purpose of an overall review and appraisal of the implementation of Agenda 21, to be held in New York from 23 to 27 June 1997, the executive summary (see annex) of the Interregional Seminar on Global Mapping for the Implementation of Multinational Environmental Agreements, held from 13 to 16 November 1996 at Santa Barbara, California. The seminar was jointly organized by the Department for Development Support and Management Services of the United Nations Secretariat, the Geographical Survey Institute, the Ministry of Construction of the Government of Japan, and the University of California at Santa Barbara.

(Signed) Hisashi OWADA
Permanent Representative
of Japan to the United Nations

(Signed) Bill RICHARDSON
Permanent Representative
of the United States of America
to the United Nations

* A/S-19/1, to be issued.

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Annex

INTERREGIONAL SEMINAR ON GLOBAL MAPPING FOR THE IMPLEMENTATION OF MULTINATIONAL ENVIRONMENTAL AGREEMENTS

(Santa Barbara, California, 13-16 November 1996)

EXECUTIVE SUMMARY

The Seminar focused on improving understanding of the role that spatial data products play in the development and implementation of multinational environmental agreements. Specifically, the Seminar documented: the need for spatial data products in support of the implementation of multinational environmental agreements; the current status of global 1:1 million or 1:1 kilometre scale mapping activities; and the requirements for international coordination of and cooperation in geospatial data development activities. The Seminar was jointly sponsored by the Department for Development Support and Management Services of the United Nations Secretariat; the University of California at Santa Barbara; and the Geographical Survey Institute, Ministry of Construction of the Government of Japan. The Seminar was attended by 80 participants from a wide variety of backgrounds, including academia, government, commercial companies and international organizations, representing 23 countries spanning the globe, ranging from small island nations to continental-sized nations. Topics covered at the Seminar included discussion and documentation of global mapping projects; thematic data layers required for a global map (e.g., topography, hydrology, transportation); limitations of such maps; harmonization of standards among national mapping organizations; archiving and access to data; the need for capacity-building in developing nations; and the overall need for better map products. Also discussed were the roles of international organizations in such areas as financing of spatial data development, facilitating technical cooperation and collaboration among national mapping organizations and similar organizations.

Background information developed for the Seminar noted, in the context of a changing global environment, that:

(a) In many developing countries, even well understood environmental changes with local causes and effects that, in the aggregate, may represent a global concern are often very low priorities for officials compared to such issues as food, health care and the safety of their people;

(b) Even in highly developed countries where scientific understanding is widespread, it is often difficult to generate political and financial support for the correction of widely recognized environmental problems;

(c) Although the primary concerns of Governments may be related to needs for national development, many relevant issues are global in nature;

(d) Large-scale, science-based datasets do not exist for most of the Earth at the present time, even in highly developed countries;

(e) Development of those datasets is labour intensive, in terms of both scientific and technical personnel, and is, therefore, expensive;

(f) Although such datasets could support a wide variety of useful applications specific to a given locale, no single use can generally justify the cost of their development;

(g) In a number of countries, the high resolution science-based datasets needed by the world community are classified and are not permitted to leave the country in any form;

(h) In some instances, where such data are exchanged with "friendly" nations, restrictive agreements can still limit access to those data;

(i) There is a need to improve the archiving of and access to global geospatial data;

(j) There is a need for improved coordination among global mapping efforts.

The Seminar was an outgrowth of the activities of the International Steering Committee for Global Mapping (ISCGM). ISCGM participants come from national mapping organizations, international organizations, academic institutions and non-governmental organizations. ISCGM is working to facilitate the development of 1:1,000,000 scale global map data. Also working towards this goal are a number of other organizations and institutions around the globe (e.g., Earth Map, the United Nations Environment Programme/Global Resources Information Database, the National Geographic Society, the International Geosphere Biosphere Programme, and the United States Geological Survey and National Image and Mapping Agency). Although participants recognized the realities of national security, national sovereignty and other issues (e.g., cost recovery and copyright) that limit the general availability of high resolution spatial data, they felt that the time has come to increase coordination in mapping efforts, wherever feasible. In discussions, some participants from small nations felt that the scale of 1:1,000,000 is too coarse for their countries' needs. Those participants were very interested in the potential for the generation of higher resolution datasets for their regions.

In presentations, participants heard that the variety and amounts of Earth observation data of many types are rapidly increasing as new generations of surface, airborne and satellite-based sensor and communication systems become operational. Realization of the existence and potential of those data are providing impetus to efforts to coordinate the development of global scale mapping efforts. That realization has spurred efforts to calibrate, validate and harmonize aspects of the collection, formatting, access to and distribution of those data. Participants were also told that those Earth observation data could in essence, form the foundation and provide the building blocks for a global spatial data infrastructure.

Such an infrastructure would include base cartographic and thematic data (e.g., physical, environmental, socio-economic, infrastructure and other relevant spatial data). Over time, it would foster the harmonization of data so

that information from one region could be integrated with information from other regions, and could be effectively employed as a tool to improve sustainable development decision-making. Making a global spatial data infrastructure a reality would also involve addressing issues of varied data policies and forging appropriate partnerships. Global mapping was recognized as an important component of the concept. "Global mapping" was understood here as a process for the creation, maintenance, access, future development and application of spatial data at appropriate scales and resolutions.

Participants were also told of the need to coordinate archiving and to support international efforts to facilitate access to those data. Capacity-building is also needed as developing nations seek to improve their capabilities to develop their own basic spatial data framework. The information that can be derived from those types of spatial data could contribute significantly to knowledge of both natural resources characteristics and social/economic dimensions of countries. Such data could also assist in the formulation, monitoring, development and management of policies for the implementation of multinational environmental agreements.

Participants strongly supported the concept of a global spatial data infrastructure. Although a global spatial data infrastructure is a key supporting tool to the implementation of several sectoral and cross sectoral chapters of Agenda 21, it is particularly relevant to the implementation of chapter 40, "Information for decision-making". That chapter is concerned with two main issues, namely "Bridging the data gap" and "Improving availability of information". Participants also believed that international bodies, such as the United Nations and the World Bank, need to do more to coordinate and to facilitate the development of a global spatial data infrastructure (i.e. including provision of the financing for dataset development and capacity-building). They believed that such an infrastructure cannot be developed without the active participation and direct involvement of national mapping organizations around the globe.

As their principal output, participants developed the Santa Barbara Statement, and agreed to work towards the goal of an integrated global spatial data infrastructure. The Santa Barbara Statement, the text of which is reproduced below, presents the conclusions, recommendations and actions agreed to by participants at the Seminar.

Santa Barbara Statement

Approaching the dawn of the twenty-first century, the international community is entering a challenging new era of development. Globalization, openness and interdependence are now recognized as key features of the world economy. Objectives under Agenda 21, particularly those related to chapter 40, "Information for decision-making", can only be effectively implemented with improved worldwide availability of and access to relevant spatial data, such as those displayed on maps. Recognizing that current global mapping efforts are primarily driven by global change concerns, future progress must also be responsive to more immediate national priorities that enhance economic growth and ensure sustainable development.

The Interregional Seminar on Global Mapping for the Implementation of Multinational Environmental Agreements (Santa Barbara, California, 13-16 November 1996) builds upon recommendations made at the First International Workshop on Global Mapping held at Izumo, Japan, in 1994. Participants at Santa Barbara agreed that actions are needed to facilitate expanded, cooperative efforts on global mapping. Actions needed include:

(a) Finding ways to increase scientific and technological development of mapping organizations in both the developed and developing countries in order to produce better map and information products;

(b) Increasing technical assistance for country capacity-building so that Governments can use spatial data products more effectively and efficiently;

(c) Strengthening of mechanisms that improve the provision of technical and economic assistance to developing countries in order to support the collection, production, archiving and dissemination of map data, which can then be integrated into global spatial data products;

(d) Designating the International Steering Committee for Global Mapping (ISCGM), which includes representatives of national mapping organizations and the international community, to coordinate the development of a global spatial data infrastructure.

Mapping of core information required to make decisions consistent with sustainable development needs to be addressed on a global scale. A diverse group, which includes national mapping organizations, space agencies, international scientific organizations, national research institutes, private-sector agencies and data sources, academia, non-governmental organizations, donors, development banks and the United Nations, all have a stake in global mapping. Global mapping is critical to the concept of a global spatial data infrastructure. "Global mapping" is understood here as a process for the creation, maintenance, access, future development and application of spatial data at appropriate scales and resolutions. A global spatial data infrastructure would include base cartographic and thematic data (e.g. physical, environmental, socio-economic, infrastructure and other relevant spatial data). Over time, the infrastructure would foster the harmonization of data so that information from one region could be integrated with information from other regions and effectively employed as a tool to improve sustainable development decision-making. Making a global spatial data infrastructure a reality will also involve addressing issues of varied data policies and forging appropriate partnerships.

Participants at Santa Barbara strongly believe that this Seminar provided an important opportunity to advance the concept of a global spatial data infrastructure. They recognize that the need for map and information products relevant to sustainable development is global:

(a) The primary concern of developing countries and economies in transition is related to pressing national development issues that could be better achieved with the availability of a global spatial data infrastructure;

(b) Incentives must be provided to foster cooperation within and among countries in efforts to produce, maintain and disseminate accurate maps and information products;

(c) A variety of technical and institutional challenges must be overcome if progress is to be realized.

Participants recognize the reasons why adequate global scale maps do not exist at present. Issues of national security, sovereignty, technology, capacity and infrastructure limit opportunities for international cooperation. Those restrictions currently combine to limit global map development activities to scales of 1:1,000,000. To maximize the benefit of global map products, spatial data-sharing needs to be encouraged on that scale and better, wherever possible. Such efforts must support spatial data requirements at varying scales and resolutions in order to meet specific local and national priorities. Current access policies (e.g., distribution and sharing restrictions) must be addressed so that they do not become constraints to the creation of globally consistent datasets.

The seminar confirmed that there are a number of ongoing efforts contributing to the production of a global map framework. Participants encourage national mapping organizations, including those from countries facing technical and financial constraints, to continue efforts that contribute to the objective of creating better more accessible maps at scales from local to global levels. Participants recognize the special role of ISCGM as a catalyst in this endeavour, and expect ISCGM to play a leading role in implementing, where appropriate, recommendations made by participants at the Santa Barbara Seminar.

Participants at the Seminar appreciate the effort made by its organizers, and recognize the input of the Seminar to furthering the implementation of global mapping within a global spatial data infrastructure. Participants recommend the following:

1. A global mapping forum must be created, bringing together data users and providers to facilitate the creation of a global spatial data infrastructure. A variety of national, regional and international organizations, non-governmental organizations, private-sector companies, academia, national mapping organizations, and space agencies, as well as other relevant organizations, must be involved in this effort. ISCGM should undertake a study to create such a forum and determine the responsibilities necessary, such as periodic assessments of progress, harmonization of standards, and mechanisms for the establishment of a global mapping network. Such a network would be connected to the Internet and/or other means to facilitate communications.

2. Agencies implementing Agenda 21 accords should precisely define their spatial data and information requirements for implementation, compliance and monitoring, with the assistance of expert groups (e.g., ISCGM). Those requirements should be included as priorities of a global spatial data infrastructure.

3. Financial and other incentives for project partnerships within a global spatial data infrastructure should be devised to facilitate the participation of national institutions of developing countries and economies in transition.

4. Donor agencies and development banks should increase assistance to institutions in developing countries and economies in transition to improve the quality of spatial data products and services, and should facilitate access to those data for the creation of regional and global map products.

5. Issues related to spatial data policy and access must be discussed by the United Nations regional cartographic conferences.

6. Overall global map development should be fostered under the umbrella of the United Nations, and should recognize initiatives being taken at the national, regional and global levels.

7. The United Nations Environment Programme Global Resource Information Database and other United Nations programmes directly involved in global spatial data infrastructure activities should be strengthened to provide necessary technical support systems and metadata services to United Nations agencies and member countries.

8. Complementary efforts for the provision of technical support by a variety of national, regional and international organizations should be encouraged and coordinated in strengthening global spatial data infrastructure activities.

9. The above-mentioned recommendations should be contained in a report to be presented to the special session of the United Nations General Assembly for the purpose of an overall review and appraisal of the implementation of Agenda 21, in 1997. That report will make a clear and practical proposal for implementation, developed under the auspices of the Department for Development Support and Management Services of the United Nations Secretariat, with the assistance of ISCGM.